duration of time the actuator is turned is varied based on the type of request and corresponding input that is made.

[0027] Similarly, the detection of a touchscreen input and activation of an actuator by a device CPU or operating system software is described above for illustrative purposes only. The invention is in no way limited to CPU-based detection of an input. A touchscreen controller, an LCD controller, or another device component or system can be configured to detect an input and provide a control output to one or more actuators.

[0028] The above-described embodiments of the present invention are intended to be examples only. Alterations, modifications and variations may be effected to the particular embodiments by those of skill in the art without departing from the scope of the invention, which is defined solely by the claims appended hereto.

What is claimed is:

1. A force feedback system having a touchscreen controller for providing touchscreen data in response to a touchscreen contact, and a liquid crystal display for displaying graphics, the system comprising:

a controller for determining display data and actuator control signals in response to the touchscreen data, the liquid crystal display displaying the graphics corresponding to the display data; and,

an actuator for pulsing in response to the actuator control signals.

2. The force feedback system of claim 1, wherein the controller and the touchscreen controller are integrated within a single application specific integrated circuit.

3. The force feedback system of claim 1, wherein the actuator includes multiple actuating devices.

4. The force feedback system of claim 1, wherein the actuator includes a vibrating motor.

5. The force feedback system of claim 1, wherein the actuator includes a solenoid.

6. A method for tactile notification in a system having a touchscreen and liquid crystal display user interface comprising:

(a) prompting for an input through the liquid crystal display;

(b) providing actuator control signals when the touchscreen is touched; and,

(c) activating an actuator for providing force feedback in response to the actuator control signals.

7. The method for tactile notification of claim 6, wherein the step of prompting includes driving the liquid crystal display with graphical information for requesting the input.

8. The method for tactile notification of claim 6, wherein the step of providing actuator control signals includes:

(i) receiving electrical signals from the touchscreen when the touchscreen is touched,

(ii) decoding the electrical signals into touchscreen data, and

(iii) processing the touchscreen data to generate the actuator control signals.

9. The method for tactile notification of claim 6, wherein the step of providing actuator control signals includes providing display data when the touchscreen is touched.

10. The method for tactile notification of claim 9, wherein the step of providing display data includes:

(i) receiving electrical signals from the touchscreen when the touchscreen is touched,

(ii) decoding the electrical signals into touchscreen data, and

(iii) processing the touchscreen data to generate display data.

11. The method for tactile notification of claim 9, wherein the step of activating the actuator includes changing the graphics of the liquid crystal display in response to the display data.

12. The method for tactile notification of claim 11, wherein the step of changing includes driving the liquid crystal display with graphical information requesting another input.

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